

Scholarship on the history of science used to perceive commentaries as a sign of decadence and decline of a civilization's scientific output. Whether in the Byzantine or Islamic context, for many historians of science, commentaries signified (and for some, still signify) that the civilization in question had run out of creative steam and was going forward only on pedantic fumes.¹ There is a peculiar kind of Eurocentrism in this idea, in that it admits innovation only if expressed in a manner conforming to post-Enlightenment European science. With such a limited lens, it is not surprising that other expressions of innovation, such as commentaries on classical works, were written off by these historians as devoid of any originality. Fortunately, however, scholars of Islamic science and philosophy have recently dedicated some long overdue attention to these commentaries. Of the most notable of these efforts one can mention Khaled El-Rouayheb's scholarship on commentaries written on logic as well as Robert Wisnovsky's scholarship on the commentaries on Ibn Sīnā's *Al-Ishārāt wa al-Tanbīhāt*.² In the specific case of the history of Islamic science, George Saliba has similarly pointed to the scientific commentaries written on astronomy as a sign of the continued efflorescence of Islamic science well into the so-called age of decline.³ Complementing these new trends in contemporary scholarship, this paper will examine 'Abd al-Qādir al-Marāghī (d. 1435 CE)'s commentaries on Ṣaḥī al-Dīn al-Urmawī's (d. 1294 CE) two musical treatises. While al-Urmawī's two treatises, written in Arabic, became the staple of learning the science of music in

¹ See for instance, H. F. Cohen, *How Modern Science Came into the World [Electronic Resource] : Four Civilizations, One 17th-Century Breakthrough* (Amsterdam: Amsterdam University Press, c2010), 68–71. On the lack of originality and innovation in the Byzantine scientific tradition, particularly the case of medicine, see David Bennett, "Medical Practice and Manuscripts in Byzantium," *Social History of Medicine* 13, no. 2 (December 1, 2000): 279–91, <https://doi.org/10.1093/shm/13.2.279>.

² For more on this scholarship see Khaled El-Rouayheb, *Relational Syllogisms and the History of Arabic Logic, 900-1900* (Boston: Brill, 2010). See also Khaled El-Rouayheb, *Islamic Intellectual History in the Seventeenth Century : Scholarly Currents in the Ottoman Empire and the Maghreb* (New York, NY: Cambridge University Press, 2015). See also Robert Wisnovsky, "Avicennism and Exegetical Practice in the Early Commentaries on the *Ishārāt*," *Oriens* 41, no. 3–4 (January 1, 2013): 349–78.

³ George Saliba, *Ma 'ālim Al-Aṣālah Wa-al-Ibdā' Fī al-Shurūḥ Wa-al-Ta 'ālīq al- 'ilmīyah al-Mut'akhirah : A 'māl Shams al-Dīn al-Khafrī, 956 H/1550 M* (London: Mu'assasat al-Furqān lil-Turāth al-Islāmī, Markaz Dirāsāt al-Makhtūṭāt al-Islāmīyah, 2015).

the post-14th century Islamic world, al-Marāghī's treatises, written in Persian, were among the most important commentaries written on the two treatises, especially among the scholars of the Persianate world, by introducing the Urmawian discourse to the cultural sphere of Transoxiana. In this paper, I will examine al-Marāghī's comments on al-Urmawī's discussions regarding the question of the acoustics of sound production, as presented in the former's multiple treatises written in Tabriz and Samarqand.

A little bit about the duo

Little is known about al-Urmawī's early life.⁴ His name suggests that he might have been from the city of Urmia (modern day northwestern Iran in the Azerbaijan region). He migrated to Baghdad during the reign of al-Musta'ṣim (r. 1242-1258 CE) as a youth. We know that he was well educated in a whole host of disciplines including Arabic language and literature, history, penmanship, calligraphy, Shāfi'ī jurisprudence, and most of all, music. His credentials secured for him multiple positions both before and after the fall of the Abbasid caliphate, such as the copyist of the newly-built library of the last Abbasid caliph al-Musta'ṣim, head of the chancery (*dīwān al-inshā'*) of Baghdad, and head of the administration for endowments (*naẓarīyat al-waqf*), until 1267 CE, when Naṣīr al-Dīn al-Ṭūsī (d. 1274 CE), the famous 13th century astronomer and political operative, succeeded him.⁵

Al-Urmawī became famous as a musician toward the end of al-Musta'ṣim's reign, when one of his students, who was a singer at the caliph's court, sang one of his compositions. The caliph asked the singer who the composer of the song was, and she credited her teacher, al-Urmawī, who at the time was at the service of the court in the capacity of copyist and librarian. Al-Urmawī was

⁴ For a brief biography of al-Urmawī see E. Neubauer, "Ṣafī Al-Dīn al-Urmawī," *Encyclopaedia of Islam, Second Edition*, April 24, 2012, http://referenceworks.brillonline.com/entries/encyclopaedia-of-islam-2/*-SIM_6447.

⁵ Neubauer.

subsequently asked to join the inner circle of the caliph as a musician and boon companion (*nadīm*). His musical prowess also helped him survive the fall of the Abbasid caliphate to the Mongol ruler Hülegü. According to al-Urmawī himself, he succeeded in convincing Hülegü to spare the lives of al-Urmawī's entire neighborhood through a combination of ransom payments and musical performances during which he literally put the Mongol ruler to sleep with the magic of his music.⁶

Whether we want to believe this account or not, there is no question that after the fall of Baghdad, al-Urmawī preserved his status, at least for a time. As mentioned, he was appointed as head of the administration to supervise religious endowments until 1267 CE. He also attached himself to the Mongol court of Baghdad and the Juwayni brothers, who ruled the city on behalf of the Mongols. It was through this connection that he came to tutor Shams al-Dīn Juwayni's (d. 1285 CE) son, Sharaf al-Dīn Hārūn, for whom he composed his influential musical treatise *Al-Risālah al-Sharafiyya*. He was also in contact with Naṣir al-Dīn al-Ṭūsī at whose request he composed *Kitāb al-Adwār*, according to certain extant manuscripts of this treatise.⁷ Unfortunately for al-Urmawī, toward the end of the 13th century, the star of his new patrons, the Juwayni family, waned when many of them, including Shams al-Dīn himself, were executed by their Mongol overlords.⁸ For al-Urmawī, this meant the loss of his positions and sources of income, which led to immense hardship

⁶ For al-Urmawī's own account of this event and also his introduction to the court of the last Abbasid caliph as a musician see 1360?-1435? Abdülkadir Merâgî, *Sharh-i Advār : Bā Matn-i Advār va Zavā'id al-Fava'id* (Tih-rān: Markaz-i Nashr-i Dānishgāhī, 1370), 22–33. For a study of this encounter see in secondary literature see Geert Jan van Gelder, "Sing Me to Sleep: Ṣafī Al-Dīn Al-Urmawī, Hülegü, and the Power of Music," *Quaderni Di Studi Arabi* 7 (2012): 1–9.

⁷ Owen Wright, *The Modal System of Arab and Persian Music, A.D. 1250-1300* (New York: Oxford University Press, 1978), 1.

⁸ For a brief biography of Shams al-Dīn Juwayni and his fate see Michael Biran, "Jovayni, Ṣāheb Divān," in *Encyclopædia Iranica*, March 9, 2009.

at the end of his life. He died in 1294 CE in the city of Baghdad, while under arrest for a debt which he could not repay.⁹

Al-Urmawī's material possessions might have been lost by the end of his life, but his legacy as a scholar of music lasted for quite a few centuries after his death. His two treatises on music are among the most influential on the subject written in the medieval Islamic world as can be seen from the sheer number of the manuscripts still extant and their vast geographical dispersion. Between the 13th century CE, when al-Urmawī composed his two treatises on the science of music, and the mid-19th century CE, many scholars from diverse parts of the Islamic world engaged his thought, particularly those who wanted to educate themselves in the mathematical sciences. An educated guess puts the boundaries of where al-Urmawī had greatest influence at the Levant, Iraq, modern-day Turkey, modern-day Iran, Transoxiana, and cities in the orbits of the Mughal empire of India, including Herat and Delhi.

Unlike al-Urmawī who spent most of his life in one city (Baghdad), al-Marāghī had a much more adventurous life which involved traveling around the Persianate world of his time. Born in mid-14th Century in the city of Marāgha in the Azerbaijan region of modern-day Iran, al-Marāghī became a famed musician and scholar of music in the Jalayerid court of Tabriz. Being associated with the court, however, meant that he was subject to the trials and tribulations of the ill-fated dynasty. When in 1376 CE Timur attacked Azerbaijan, Ahmad the Jalayerid ruler of the region, fled to Baghdad with his court, al-Marāghī included. The musician was in the company of the defeated ruler in Baghdad for some ten-odd years or so, until in 1392 CE Timur captured Baghdad. From there, Ahmad fled and took refuge in Egypt, while al-Marāghī alongside most of the court was moved to Samarqand. A few years later, al-Marāghī returned to Tabriz as part of Timur's

⁹ Neubauer, "Ṣafī Al-Dīn al-Urmawī."

court, who was given the rule of Azerbaijan. Using a particularly chaotic moment in the court of Tabriz, the musician fled the city and reunited with his former patron, Jalayerid Ahmad, when he recaptured the city of Baghdad with the help of Egyptian Mamluks. None of this sat particularly well with Timur, who decided to attack Baghdad one more time in 1401 CE. Al-Marāghī was captured once more, this time drawing the ire of Timur for fleeing his son's court in Tabriz. The decision was made to put the musician to death. Fortunately for him though, reciting a verse of the Qur'an in the most beautiful way, saved his life from imminent death and he was sent once more to Samarqand. He would reside there until Timur's death in 1405 CE. After Timur's death, al-Marāghī moved to Heart and to Shahrukh's court, where he eventually died due to a plague epidemic in 1434 CE.¹⁰ Since he mentions most of these events in his musical treatises, we can surmise that almost all of them were either composed in Samarqand under Timur's patronage, or in Heart under his son Shahrukh's patronage.

Note, Sharpness, and Heaviness

The term I will examine here is the concept of the note. According to al-Urmawī in his *Kitāb al-Adwār*, "the note is a single sound that extends for a specific time on a specific degree of sharpness and heaviness, that it would be yearned for by [one's] nature."¹¹ Al-Urmawī does not clarify his source, but his definition is almost the same as the one he provides in his other book, *al-Risālat al-Sharafīyya*, and is attributed to Ibn Sīnā.¹² This definition itself is a more complete

¹⁰ Abdülkadir Merâgî, *Sharh-i Advār*, 22-33.

¹¹ 'Abd l-Mu'min ibn Yūsuf Al-Urmawī, "Kitāb al-Adwār fī l-mūsīqā" (1294), 146. "*Al-naghmatu şawtun lābithun zamānan mā 'alā ḥaddin mā min al-ḥiddati wa l-thiqli maḥnūnun ilayhi bi-l-ṭab'.*"

¹² 'Abd l-Mu'min ibn Yūsuf Al-Urmawī, "al-Risāla al-Şarafīyya fī l-nisabi l-ta'lifīyya" (n.d.), 38v. "*Al-naghmatu şawtun lābithun zamānan mā 'alā ḥaddin mā min al-ḥiddati wa l-thiqli wa zāda ba'ḍuhum maḥnūnun ilayhi 'an.*"

version of al-Fārābī's definition, which identifies the note as "a single sound that persists for a perceptible duration, in the object in which it [the sound] is to be found."¹³

There is an important difference between al-Fārābī's and Ibn Sīnā's definitions. Al-Fārābī emphasizes singleness as a necessary condition for a sound to be a note, but sharpness and heaviness are absent in his definition. This pair, meanwhile, plays a crucial role in Ibn Sīnā's definition (and in al-Urmawī's subsequent appropriation of it). I will address the definition of a note and its relation to sharpness and heaviness later, but first it is important to clarify an important question: What these philosophers mean by sharpness and heaviness?

In short, sharpness and heaviness relate to what today we call pitch: sharper is higher pitched and heavier is lower pitched. Accordingly, some contemporary translators of ancient Greek material, like Andrew Barker, after introducing the two terms, have opted to replace them with more conventional terms such as highness and lowness.¹⁴ The reasons behind the adoption of the two terms of sharpness and heaviness are far too complicated to elaborate here. But suffice to say, the two terms referred to the speed of the movement of the air particles that carried the sound. The faster these particles moved, as the Hellenistic theory went, the higher pitched the produced sound was and vice versa. In other words, sharpness and heaviness referred to the speed of the movement and not to its weight. Sharp was fast while heavy was slow. Now with that preface in mind, let us take a look at how Islamic philosophers approached and appropriated this material.

Al-Fārābī's definition of the note makes no explicit reference to sharpness or heaviness, even though he draws on the concepts when discussing notes throughout his book.¹⁵ In other

¹³ Al-Urmawī, 38v. "*Al-naghmatu ṣawtun wāḥidun lābithun zamānan dhā qadrin maḥsūsīn fī l-jismi l-ladhī fīhi yūjadu.*"

¹⁴ See for instance, Barker, Andrew, ed. Greek Musical Writings. Vol. 2 (Cambridge: Cambridge University Press, 1990), 41-42, 61, 69.

¹⁵ See for instance Fārābī, *Kitāb Al-Mūsīqā Al-Kabīr*, ed. Ghaṭṭās Abdel Malek Khashaba (al-Qāhirah: Dār al-Kātib al-‘Arabī lil-Ṭibā‘ah wa-al-Nashr, 1967), 112.

words, he seems to be aware of the role that sharpness and heaviness play in defining a note. Yet, when it comes to providing a definition, he refrains from using the terms explicitly.¹⁶ Ibn Sīnā on the other hand, was first to write explicitly that sharpness and heaviness are essential to the definition of a note. Al-Urmawī also gives more weight to this definition by elaborating on it in his abridged treatise, *Kitāb al-Adwār*. Ibn Sīnā does not explain why he puts sharpness and heaviness as an explicit characteristic of the notes. Fortunately, al-Urmawī sheds some light on his predecessor's reasoning. Ibn Sīnā's definition states that "the note is a single sound that extends for a specific time on a specific degree of sharpness and heaviness that would be yearned for by [one's] nature."¹⁷ Al-Urmawī comments on the definition in his *Al-Risālat al-Sharafiyya*: "Sound in this manner is like a genus, while the species or the particular. . . is the sharpness and heaviness that persists for a period of time. . . ."¹⁸ In this passage, al-Urmawī is using the Aristotelian language of logic explained in *Prior* and *Posterior Analytics*.¹⁹ For him, the difference between note and sound is that sound is a general term, the genus, used to designate any kind of audible phenomenon. A note, on the other hand, is a specific kind of sound, a species of sound with a particular set of characteristics like, in this case, sharpness or heaviness.

In his writings, al-Urmawī praises his predecessors, especially Islamic ones like al-Fārābī and Ibn Sīnā. But despite his praise, he does not accept everything in their treatises. Occasionally,

¹⁶ Fārābī, 214.

¹⁷ Avicenna and Ghaffās 'Abd al-Malik Khashabah, *Sharḥ Al-Mūsīqā: Min Kitābay Al-Shifā' Wa-Al-Najāh: Turāth Al-Mūsīqā Al-'Arabīyah (Al-Qarn Al-Khāmis H)*, al-Ṭab'ah 1 (al-Qāhirah: al-Majlis al-A'lā lil-Thaqāfah, 2004), 257.

¹⁸ Al-Urmawī, "al-Risāla al-Sharafiyya fī l-nisabi l-ta'līfiyya," 39r. "*Fa l-ṣawtu fī hādihā l-rasmi huwa ka l-jinsi wa l-faṣlu aw al-khāṣṣatu huwa l-ḥiddatu wa l-thiqū l-lābithu zamānan.*"

¹⁹ It is not certain that al-Urmawī had Aristotle's writings in mind when he used these Aristotelian notions. After all, after two hundred years of Aristotelianism in the Islamic world, these terms were already by al-Urmawī's lifetime in wide scholarly usage. For a history of Aristotelianism in Islam see F. E. (Francis E.) Peters, *Aristotle and the Arabs; the Aristotelian Tradition in Islam* (New York: New York University Press, 1968). For a full discussion of universals and particulars in Aristotelian philosophy see Aristotle, *Prior Analytics* (Indianapolis, Ind: Hackett Pub. Co, c1989), 1–3, 111–12. and Aristotle, *Posterior Analytics* (New York: Oxford University Press, 1994), 13, 132–34.

he disagrees with his intellectual mentors and, albeit in a very respectful fashion, critiques what he believes are their mistakes. Some of these critiques have linguistic and logical rationale, while others are about the acoustical claims made by al-Urmawī's predecessors. One of the methods with which al-Urmawī disputes the acoustical claims is by evaluating their credibility through experimentation with musical instruments. One such example revolves around a claim made by al-Fārābī about the nature of sound production and its relation to the sharpness and heaviness of the notes produced through plucking of musical instruments. According to al-Fārābī, whenever the air that is transmitting the sound moves in a more compact manner (*ṣadīd al-iğtimā*) we hear the produced sound sharper, i.e. with a higher pitch. This more compact movement of the air, is in turn the result of the speed of the movement of the air (*sur 'atu ḥarikatihī*), meaning the faster the air moves, the more compact its particles will be. Al-Fārābī then concludes, that whenever an instrumentalist plucks the instrument with more intensity (*aṣad*), this will result in a faster movement of the air, which in turn will result in a sharper sound due to the more compact movement of the air.²⁰ For Al-Urmawī, it is a mistake to claim, as he says Al-Fārābī does, that if a musician plays his instrument with more force a faster and sharper sound would be produced:

As for the statement of Abū Naṣr [i.e. al-Fārābī] in his book, regarding the instrumentalist's striking [of the instrument], that whenever it [the strike] was the strongest, the sound would be the sharpest, and whenever the strike was the weakest, the sound would be the heaviest, it is not generally true. For if that were to be the case, it would have been possible to unify different sharp and heavy notes produced from one string, just by altering the instrumentalist's intensity or weakness when striking the string, and this is known to be wrong. Rather, the truth is to say that it is the repetition [?] of its [the sound's] loudness by the intensity of the strike and its softness by its weakness, and not by sharpness and heaviness.²¹

²⁰ Al-Fārābī himself clarifies this point and confirms al-Urmawī's understanding in his *KMK*. See Fārābī, *Kitāb Al-Mūsīqā Al-Kabīr*, 216-17.

²¹ Al-Urmawī, "al-Risāla al-Šarafīyya fī l-nisabi l-ta' līfīyya," 38v. "wa immā mā qālahu l-shaykhu Abū Naṣrin fī kitābihī, an zaḥma l-qāri 'i, kullamā kāna ashadda kāna l-ṣawtu aḥadda wa kullamā kāna l-zaḥmu aḍ 'afa kāna l-ṣawtu athqala fa ghayru muṭradin. Idhā law kāna kadhālika, li-amkana ittiḥādu naghāmāti mukhtalifati l-ḥiddati wa l-thiqli min muṭlaqi l-watari l-wāḥidi, bi-mujarradi shiddati qar 'i l-qāri 'i li-l-watari wa ḍa fihī, wa hādhā ma 'lūmu l-buṭlāni. bal al-ḥaqqu an yuqāla annahā tardāda jihārahu bi-shiddati l-qar 'i wa khifātaḥu bi-ḍa fihī, lā ḥidda wa thiql

Al-Urmawī argues here that the relation the speed of the air carrying the sound and the sound's sharpness and heaviness that al-Fārābī theorizes is not true in practice.²² For if that was the case, a musician could obtain different notes with differing sharpness and heaviness by plucking the strings at different intensities. It is clear from al-Urmawī's language that the instrument he has in mind here is a kind of plucked chordophone similar to the oud. The last part of al-Urmawī's statement clarifies what will happen if a musician increases or decreases the plucking intensity: this action simply increases or decreases the volume of the produced sound. He also goes on to explain under what circumstances al-Fārābī's statement could have been correct:

Had he [i.e. al-Fārābī] specified this judgement to the heard notes of aerophone instruments like the reed, that would have been possible. For one could block the pushing force which would then be the cause of the sharpness of a note from a singular hole. And that is why there are eight air holes, from which more notes than the number of holes come out, sometimes through [changing] the intensity or the weakness of the pushing force, or sometimes by blocking some of the holes of the air outlets.²³

Al-Urmawī's observation conforms to the reality of sound production in musical instruments. Change of intensity of the blowing force, known among musicians of wind instruments as *overblowing*, is indeed one of the ways with which musicians in wind, or aerophone, instruments change sharpness or heaviness of the produced notes.²⁴ What al-Fārābī had stated in his treatise is only true for aerophones, not chordophones. Comparing the credibility of this claim with the reality of musical instruments seems such an obvious task to undertake. Yet, this is

²² Of course, it is the force that is used to produce the sound that is mentioned in his critique, and not the speed of the sound. But as we have seen, according to the Greek sources, bigger force behind producing sound should result in faster sound waves which will be heard as sharper, higher pitched sounds (and notes). Inversely, smaller force should result in slow waves that would create heavier, lower pitched sounds (and notes).

²³ Al-Urmawī, "al-Risāla al-Šarāfiyya fī l-nisabi l-ta' līfiyya," 38v. "wa law khaṣaṣa hādhā l-ḥukmi bi-l-naghamāti l-masmū'ati min al-ālāti dhawāta l-naḥkhi ka l-yarā'i, la-kāna mumkinan. In qad yastadda l-quwwatu l-dāfi'atu fa yakūnu sababan li-ḥiddati l-naghamati min makhlaṣin wāḥidin. Wa kadhālika tuj'alu manāfidhu l-hawā'i thamānīyatan, wa yustakhraju bihā min al-naghamāti mā huwa aktharu 'adadn min al-manāfidhi, ṭawran bi-shiddati l-quwwati l-dāfi'ati wa ṭawran bi-ḍa'fihī, wa ṭawran bi-saddi ba'ḍi l-manfadhi min al-hawā'i"

²⁴ Bate, Philip, and Murray Campbell. "Overblowing | Grove Music." Accessed March 28, 2018. <http://www.oxfordmusiconline.com/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000020608>.

precisely what al-Fārābī did not do and al-Urmawī did. This discrepancy is perhaps because al-Urmawī was a musician, while al-Fārābī was a philosopher who also happened to write a treatise on the science of music.

Al-Marāghī on the other hand, defends al-Fārābī against al-Urmawī's attacks, by claiming that the latter has essentially misread and consequently misunderstood the former's remarks on the subject, taking up the matter both in his commentary on al-Urmawī's *Kitāb al-Adwār* and in his own standalone work *Jāmī' al-Alḥān*. Even though the Persian commentary is supposed to be on al-Urmawī's *Kitāb al-Adwār*, it also includes quotes from and comments on *al-Risāla al-Sharafīyya*. In one such passage, al-Marāghī addresses the critique of al-Urmawī (alluded to obliquely under the rubric of "certain contemporary scholars" [*ba'ẓi az muta'akhhirān*]) against al-Fārābī's argument regarding the acoustics of sound production:

Shaykh Abū Naṣr [i.e. al-Fārābī] did in fact mention the cause behind sharpness and heaviness in regard to the chordophone instruments. After that, he made this statement [i.e. the contentious statement under inquiry] that the intensity of the push and its opposite is the cause for sharpness and heaviness, in reference to aerophone instruments. Therefore this critique against the Shaykh is not a valid one.²⁵

In other words, al-Marāghī is not disputing the soundness of al-Urmawī's argument, but rather wants to challenge the latter's reading of al-Fārābī's original statement. Al-Marāghī believes that the point made by al-Urmawī was already present in al-Fārābī's statement and all the former needed to do was to pay closer attention to the order of the causes presented by the latter in *KMK*. Had he done so, he would have noticed, just as al-Marāghī has done, that al-Fārābī's statement was all along about the aerophones.

²⁵ Abdülkadir Merāḡī, *Sharh-i Advār*, 97. "Ammā Shaykh Abū Naṣr raḥimahu Allah dar kitāb-i khvud sabab-i ḥiddat va siql rā dar ālāt-i zavāt al-awtār bayan karda ast ba'd az ān īn sukhan rā dar ālāt-i zavāt al-naṣkh gufta ki shiddat-i qar' sabab-i ḥiddat ast va muqābil-i ān sabab-i siql. Pas, bar Shaykh i 'tirāz vārid nabāshad."

The acoustical discussions are interesting in and of themselves. But here I want to draw your attention to another feature of the al-Marāghī's defense of al-Fārābī: for al-Marāghī to base his defense on the positionality of the statement inside *KMK*, he must have seen al-Fārābī's treatise to make such a claim. This is noteworthy as he erroneously attributes Ibn Sīnā's definition quoted in al-Urmawī's works to the *Shifā* and not the *Najāh*, which indicates that he had not read Ibn Sīnā's works himself and was only exposed to them through al-Urmawī. Upon seeing the definition in al-Urmawī's works attributed to Ibn Sīnā, perhaps al-Marāghī assumed that the statement must have come from the more well-known work of the *Shifā* rather than the more obscure *Najāh*. This then would mean that by the time of al-Marāghī, as far as the science of music was concerned, Ibn Sīnā had gone out of fashion, only studied through secondary sources such as al-Urmawī's treatises, while al-Fārābī and al-Urmawī were still current. This contrasts with the time of al-Urmawī himself, when Ibn Sīnā still featured prominently in the discourse.

Another important feature of this pre-modern scholarly debate is how it transcends time and space. Al-Fārābī hailed from Transoxiana of the 10th century and was mainly active in Iraq. Ibn Sīnā meanwhile read al-Fārābī's works in Bukhara of the 11th century before finally moving to Isfahan and Hamadan. Al-Urmawī was mainly active in Baghdad of the 13th century and it was in this city that he formulated his critiques of the Second Teacher. Finally, al-Marāghī began his career from Tabriz of the 14th century and ended it in the Herat of the early 15th century via Baghdad and Samarqand. What connected all of these great thinkers to one another was the intellectual capacities of a scientific discipline: the science of music.

Of course, at this stage with only one example analyzed, a definitive verdict about the accessibility of certain scholars' works in later periods cannot be issued. Neither is one example enough to showcase the importance of the commentary tradition in inciting intellectual debates

that went beyond mere preservation of an already existing repository of knowledge. Additionally, I have only examined three sources regarding al-Fārābī's statement and the debate that ensued, while there are many more commentaries and treatises that could equally be enlightening. But at the very least I would like to invite other scholars of the field to carry out similar close reading exercises to further elucidate the intellectual practices of scholars of the medieval Islamic world that transcended temporal and geographical limitations of the time.